ATTORNEY DOCKET

40390
USSN/P1SS79
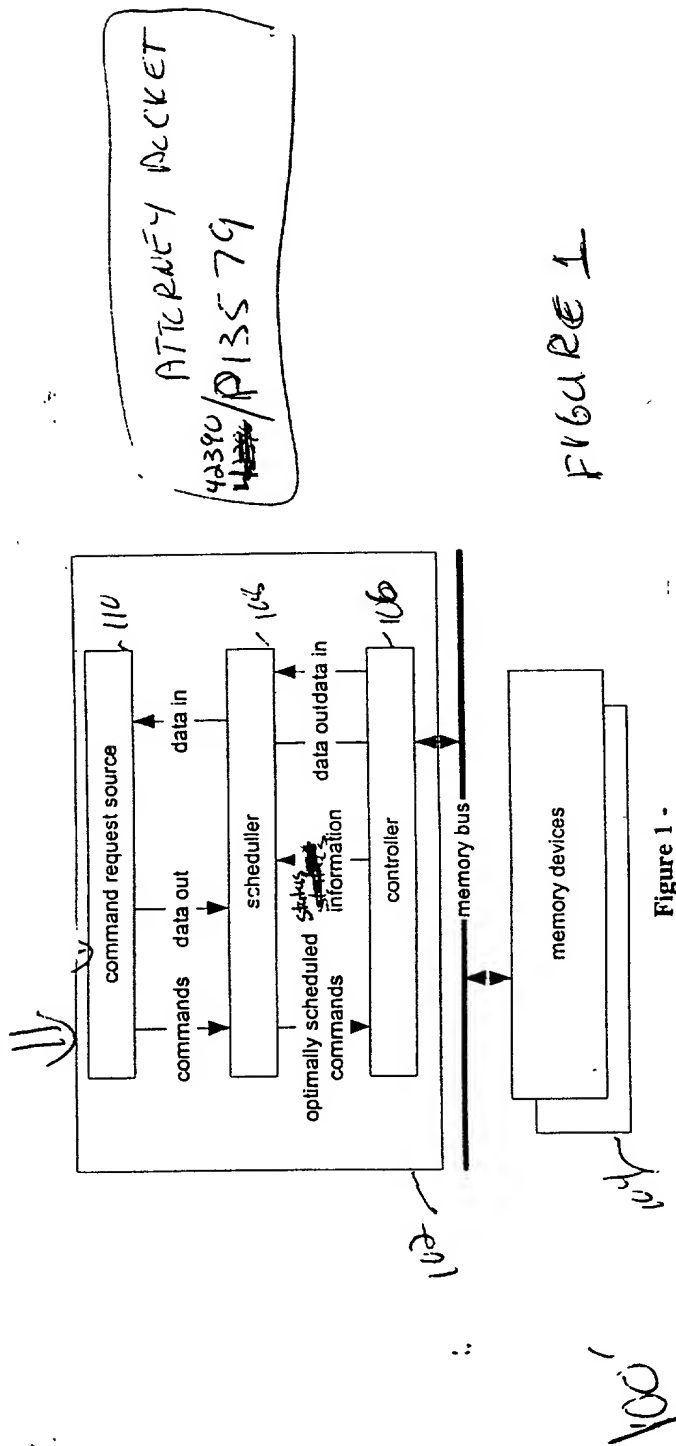
REQUESTS TO ACCESS MEMORY DEVICES

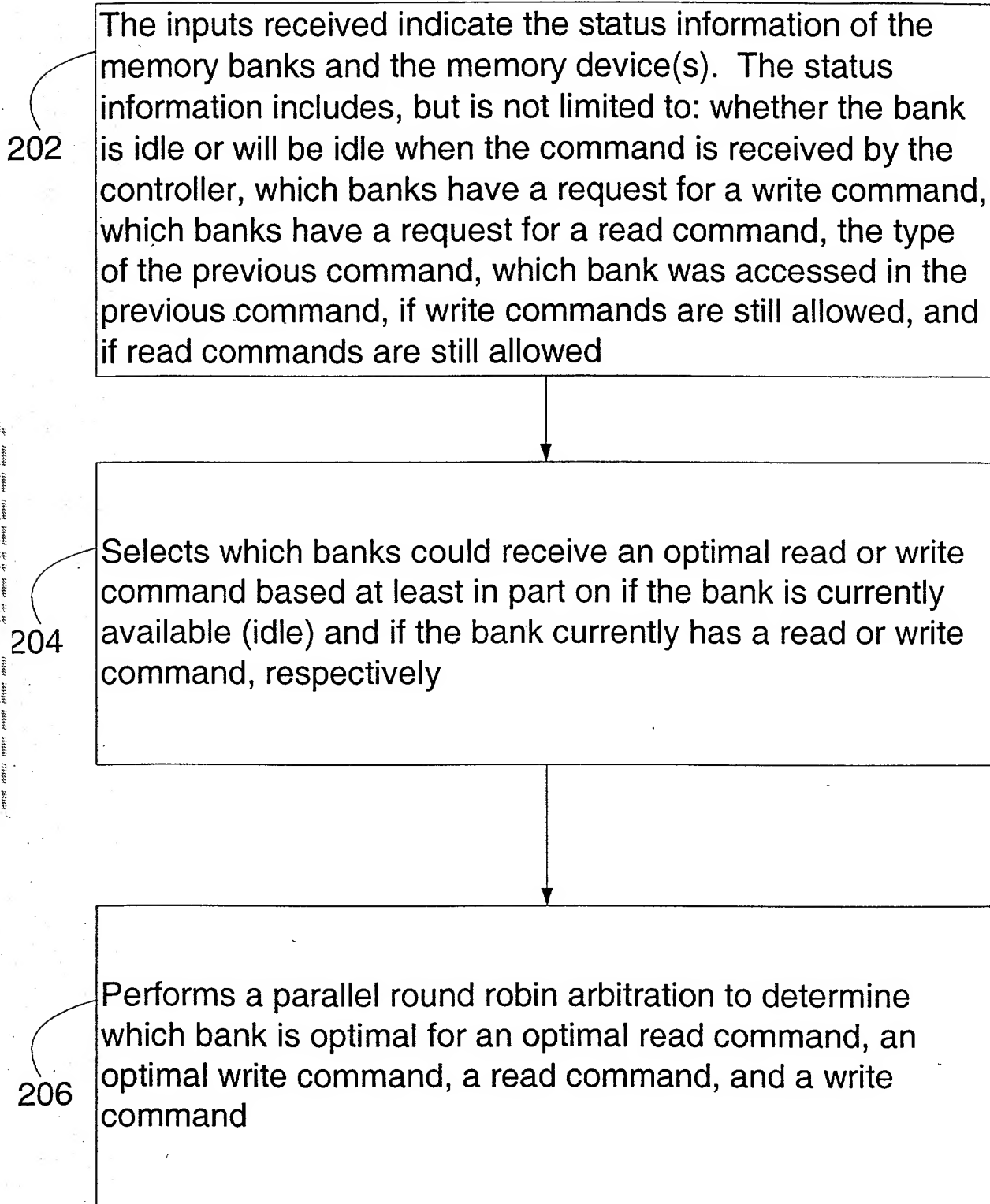command request source — 110

data in

commands   data out

scheduler — 104

status information

optimally scheduled commands

controller — 106

data out   data in

memory bus

memory devices

100'   102   104

FIGURE 1

Figure 1 -

202

The inputs received indicate the status information of the memory banks and the memory device(s). The status information includes, but is not limited to: whether the bank is idle or will be idle when the command is received by the controller, which banks have a request for a write command, which banks have a request for a read command, the type of the previous command, which bank was accessed in the previous command, if write commands are still allowed, and if read commands are still allowed

204

Selects which banks could receive an optimal read or write command based at least in part on if the bank is currently available (idle) and if the bank currently has a read or write command, respectively

206

Performs a parallel round robin arbitration to determine which bank is optimal for an optimal read command, an optimal write command, a read command, and a write command

FIGURE 2